

Patent claims

1. Device for examining filled containers (10) for foreign bodies (26), such as glass splinters, with a transport apparatus (16) for transporting the containers (10) individually in succession in a row on a plane of transport, with an X-ray source (18) for emitting an X-ray (24) in a predetermined direction and with an apparatus (20, 22) for recording the X-rays (24) after they have passed through the containers (10), the direction in which the X-rays (24) are emitted from the X-ray source (18) is inclined by between 10° and 60° to the plane of transport.
2. Device according to claim 1, two X-ray sources (18) being provided and the first X-ray source (18) being arranged above the plane of transport and its X-rays (24) being directed from above towards the plane of transport and the second X-ray source (18) being arranged below the plane of transport and its X-rays (24) being directed from below towards the plane of transport.
3. Device according to claim 2, an apparatus (20, 22) for recording the X-rays (24) after their passage through the containers (10) being allocated to each X-ray source (18) and the X-rays recorded by the recording apparatuses (20, 22) being compared with one another in an evaluation apparatus.
4. Device according to claim 3, the arrangement being such that the rays of the two X-ray sources (18) fall onto areas separate from each other of the apparatus (20) for recording the X-rays (24).
5. Device according to one of claims 1 to 4, the apparatus for recording the X-rays (24) being an X-ray image converter (20) with downstream CCD camera (22).
6. Use of the device according to one of claims 1 to 5 for examining filled containers (10) for foreign bodies.

7. Use according to claim 6, the X-ray source or X-ray sources (18) being positioned such that the ray course is approximately tangential to the maximum slope of the bulge of the container bottom.